## GENERAL NOTES

- 1. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORMATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION DATED 20\_ AND AMENDMENTS.
- 2. THE SIGN STRUCTURES DESIGN AND ANALYSIS HAS BEEN DONE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL GURPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS - FOURTH EDITION - DATED 20\_\_ AND INTERIMS, USING BASIC WIND SPEED OF 90 MPH AND 50 YEARS OF DESIGN LIFE. FATISHE OF OF THE STRUCTURE CONFORMS TO FATIGUE CATEGORY 1 OF THE SPECIFIED AASHTO STANDARD SPECIFICATIONS.
- 3. ALL BUTT JOINT WELDS SHALL BE FULL PENETRATION GROOVE WELDS WITH BACK-UP PLATES OF 14" MIN. THICKNESS.
- 4. THE BACK-UP PLATES FOR ALL FULL PENETRATION WELDS SHALL BE WELDED CONTINUOUSLY TO THE JOINED PIECES. THIS CAN BE DONE BY FITHER A CONTINUOUS FILLET WELD ON THE BACK SIDE OF THE PIECE, OR BY A CONTINUOUS WELD IN THE ROOT OF THE FULL PENETRATION WELD, UNLESS OTHERWISE NOTED.
- 5. ALL BOLTS, RODS, AND RELATED HARDWARE SHALL BE GALVANIZED AFTER FABRICATION PER AASHTO M 232.
- lpha 6. ALL STEEL SURFACES SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M 111. ALL EXTERIOR STEEL SURFACES SHALL BE PAINTED IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE MAINTENANCE PLATFORM AND ASSOCIATED HAND RAILINGS SHALL NOT BE PAINTED. FOR MAINTENANCE PLATFORM ATTACHMENT BRACKET DETAILS FOR MONOTUBES SEE STANDARD PLAN G-95.20. PAINT ENTIRE ATTACHMENT BRACKET TO MATCH EXISTING STRUCTURE EXCEPT FOR MOUNTING BEAM. MAINTENANCE WALKWAY DETAILS SHALL BE DETERMINED FROM THE CONTRACT PLANS OR THE STANDARD PLANS.
- $\pi$  6. ALL STEEL SURFACES SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M 111. ALL EXTERIOR STEEL SURFACES SHALL BE PAINTED IN ACCORDANCE WITH THE SPECIAL
- 7. SIGN PANELS AS SHOWN IN THE CONTRACT PLANS SHALL BE INSTALLED WITH THE SIGN STRUCTURE OR IMMEDIATELY AFTER THE SIGN STRUCTURE IS ERECTED.
- A 8. FABRICATE BEAM TO PROVIDE SMOOTH PARABOLIC CAMBER CURVE. SEE CAMBER DIAGRAM. DO NOT SHIM AT BOLTED SPLICES.
- B & FABRICATE BEAM TO PROVIDE STRAIGHT CAMBER, SEE CAMBER DIAGRAM. DO NOT SHIM AT BOLTED SPLICES.
- 9. FABRICATE POST STRAIGHT.

COVER PLATES

10. MATERIALS SPECIFICATIONS:

ALL STRUCTURAL STEEL EXCEPT ASTM A 572 GR. 50 OR AS OTHERWISE NOTED ASTM A 588

ANCHOR RODS HANDHOLE COVER SCREWS SPLICE BOLTS SIGN BRACKET RODS MOUNTING BEAM BOLTS

ASTM F 1554 GR. 105 ASTM F 593 GR 1 AASHTO M 164 ASTM A 307 AASHTO M 164 ASTM A 36

- 11. BOTTOM OF BASE PLATE ELEVATIONS AND POST HEIGHTS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD MEASURE ANCHOR ROD LOCATIONS. ELEVATIONS. CLEARANCES AND ALL STEEL STRUCTURE DIMENSIONS, AND SUBMIT TO ENGINEER FOR APPROVAL PRIOR TO COMPLETION OF FABRICATION. AS AN OPTION, CAP OF ONE FOUNDATION MAYBE PLACED WHILE COMPLETED SIGN BRIDGE IS TEMPORARILY SUPPORTED IN PLACE.
- 12. POSTS, BASE PLATES, BEAMS AND SPLICE PLATES ARE MAIN LOAD CARRYING TENSILE MEMBERS OR TENSION COMPONENTS OF FLEXURAL MEMBERS AND SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST AS DESCRIBED INSECTION 6-03.2 FOR AASHTO M 270 MATERIAL. NON-DESTRUCTIVE TEST ACCEPTANCE CRITERIA TO CONFORM TO TENSILE MEMBERS WITH CYCLIC LOAD.
- 13. SEE OTHER PLANS FOR CONDUIT PENETRATIONS AND HAND HOLES. REFER TO ELECTRICAL PLANS FOR INTERNAL ROUTING OF CONDUCTORS, CONDUIT CONDUCTORS SHALL NOT BE ATTACTHE OUTSIDE OF THE SIGN STRUCTURE. ISOJATION SWITCH SHALL SE LOCATED WEAR SHOULDER OF ROADWAY ON THE OPPOSITE SIDE OF THE BEAM AS THE SIGNS. SEE NEMA 3R TERMINAL CABINET DETAIL ON BRIDGE SHEET \_\_\_. (10.1-A1-2, 10.1-A2-2 OR 10.1-A3-2
- 14. THE MAXIMUM SIGN AREA ON THE STRUCTURE
- $\alpha$  15. FOR SIGN AND LIGHT ATTACHMENT BRACKET DETAILS FOR MONOTUBES SEE STANDARD PLAN G-90.20. PAINT ENTIRE ATTACHMENT BRACKET TO MATCH EXISTING STRUCTURE EXCEPT FOR MOUNTING BEAM. SIGN, BEAM LENGTHS, AND SIZE SHALL BE DETERMINED FROM THE STANDARD PLANS. SPACING SHALL BE DETERMINED FROM THE CONTRACT PLANS. VARIABLE MESSAGE SIGNS SHALL HAVE MOUNTING BEAMS @ 3'-0" MAXIMUM.
- 15. FOR SIGN AND LIGHT ATTACHMENT BRACKET DETAILS FOR MONOTUBES SEE STANDARD PLAN G-90.20. PAINT ENTIRE ATTACHMENT BRACKET TO MATCH EXISTING STRUCTURE EXCEPT FOR MOUNTING BEAM. SIGN, BEAM LENGTHS, AND SIZE SHALL BE DETERMINED FROM THE STANDARD PLANS. SPACING SHALL BE DETERMINED FROM THE CONTRACT PLANS.
- β 16. THE TOTAL BEAM LENGTH "S" SHALL NOT EXCEED 30'-O".
- 17. ALL WELDING SHALL BE DONE TO MINIMIZE DISTORTION. PERMISSIBLE MONOTUBE DIMENSION VARIATIONS FOR OUTSIDE DIMENSIONS, WALL THICKNESS, LENGTH, STRAIGHTNESS, (PARABOLICALLY CAMBERED SIGN BRIDGE BEAMS EXCLUDED) SQUARENESS OF SIDES AND TWIST SHALL BE TN ACCORDANCE WITH SECTION 11 OF ASTM A500.

note to designer  $\pi$  cantilever only  $\alpha$  balance "t" & sign bridges only β balance "t" & cantilevers only  $\lambda$  sign bridge only (modify these notes to fit specific project structure type.) note to designer

suggested sheet order:

lavouts cantilever balanced "t"

sign bridge

general notes & other misc. info.

structural details cantilever balanced "t" sign bridge

foundation cantilever type 1

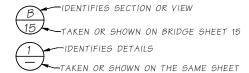
type 2 or 3 balanced "t" type 1 type 2 or 3 sign bridge

type 1

type 2 or 3

barrier shape modification

## LEGEND



Bridge Design Engr. STANDARDS\Sign Bridges\GENERAL NOTES.MAN ION STATE FED. AID PROJ. NO. SHEET TOTA Designed By WASH. 10 Checked By Detailed By JOB NUMBER Bridge Projects Eng Prelim, Plan By DATE REVISION

**BRIDGE** AND **STRUCTURES** OFFICE



STANDARD MONOTUBE SIGN STRUCTURES GENERAL NOTES

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12/4/2012